



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,665	11/03/2006	Akiyoshi Itoh	118105-002	2489
24573	7590	10/21/2009	EXAMINER	
K&L Gates LLP			CHAU, LISA N	
P.O. Box 1135			ART UNIT	
CHICAGO, IL 60690			PAPER NUMBER	
			1794	
			MAIL DATE	
			DELIVERY MODE	
			10/21/2009	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,665	Applicant(s) ITOH ET AL.	
	Examiner Lisa Chau	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 and 9-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/4/06 and 9/2/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Group II (Claims 4-8) in the reply filed on 9/2/09 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pub. No. 20020197516 ("Kirino et al.").

With regards to Claims 4 and 6, Kirino et al. teaches a magnetic recording medium (title) comprising a substrate (11), an underlying layer (12) in which a large number of recesses of an extremely small size are uniformly demonstrated, and a magnetic film (13) formed on the entire surface of the underlying layer (12) in which said recesses of the extremely small size are demonstrated (Figs. 5 and 7).

With regards to Claim 5, Kirino et al. teaches the magnetic film (13) is layered on the recesses demonstrated in the underlying film (12) to form protuberances which are discrete with respect to one another (Fig. 7).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. No. 200201797516 ("Kirino et al.") as applied to claim 4 above, and evidence provided by Wohlfarth, E.P. *Ferromagnetic materials: A handbook on the properties of magnetically ordered substances*. Vol. 2. Amsterdam, New York, Oxford: North-Holland Publishing Company, 1980.

With regards to Claims 7 and 8, Kirino et al. teaches its silicon oxide and iron oxide underlying layer (12) is uniformly formed with large number of spherically-shaped voids of the same size, with the diameter of several nm to tens of nm in a preset cubic structure (Fig. 7, [0056], [0059], and [0072]). Examiner notes that it has been held that a mere change in shape without affecting the functioning of the part would have been within the level of ordinary skill in the art, In re Dailey et al., 149 USPQ 47; Eskimo Pie Corp. v. Levous et al., 3 USPQ 23.

Kirino et al. does not specifically teach its underlying layer (12) of silicon oxide and iron oxide formed to a face-centered cubic structure.

However, as evidence provided by Wohlfarth, iron oxides has a crystal lattice of a face-centered cubic structure (1st ¶ under *Structure of iron oxides* on Page 421).

Art Unit: 1794

Therefore, it is intrinsic that Kirino et al.'s underlying layer (12) also has a face-centered cubic structure as claimed.

It has been held that where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC §102 or on prima facie obviousness under 35 USC §103, jointly or alternatively. In re Best, Bolton, and Shaw, 195 USPQ 430. (CCPA 1977).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Chau whose telephone number is (571)270-5496. The examiner can normally be reached on Monday-Friday 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on (571) 272 - 1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LC/
Lisa Chau

/Holly Rickman/
Primary Examiner, Art Unit 1794